Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of	)	
	)	
Applications of	)	
	)	
Comcast Corp. and	)	**MB Docket No. 14-57**
Time Warner Cable Inc.	)	
	)	
For Consent To Assign or	)	
Transfer Control of	)	
Licenses and Authorizations	)	

COGENT COMMUNICATIONS GROUP, INC.'S PETITION TO DENY

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TABLE OF CONTENTS

Cogent Communications Group, Inc. ("Cogent") petitions the Federal Communications Commission (the "Commission" or the "FCC") to deny the above-referenced applications filed by Comcast Corp. ("Comcast") and Time Warner Cable, Inc. ("TWC") seeking consent from the Commission to transfer control of the licenses and authorizations held by TWC and its subsidiaries to Comcast ("the transaction").[1]

I. Introduction

Comcast is the nation's largest cable company and its acquisition target, TWC, is the nation's second largest cable company. Both Comcast and TWC offer broadband interconnection services and Multichannel Video Programming Distribution ("MVPD") services. Much like the AT&T of the 1970s, when DOJ filed its seminal antitrust case against it, both Comcast and TWC have achieved their size largely through mergers and acquisitions.[2] And, much like the AT&T of that time, both companies exercise substantial market power over subscribers to their networks. Today, many—if not most—of Comcast's and TWC's subscribers have no practical alternative for the high-speed connection to the Internet that is necessary to access the video and Voice over Internet Protocol ("VoIP") applications sought by consumers. Even without the contemplated transaction, each company already dwarfs the size of the next

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[1] *See Commission Seeks Comment on Applications of Comcast Corporation, Time Warner Cable, Inc., Charter Communications, Inc. and Spinco to Assign and Transfer Control of FCC Licenses and Other Authorizations*, Public Notice, MB Docket No. 14-57, DA 14-986 (July 10, 2014). In connection with the transaction, Comcast has also has submitted an application to divest certain licenses and associated cable systems and subscribers to Charter Communications Corp. *Id*. at 2. Cogent takes no position on that divesture in and of itself, other than to note that the proposed Charter transaction does not cure the competitive and public interest harms raised by the underlying Comcast/TWC transaction.

[2] For a detailed description of the growth of Comcast by acquisition that also includes descriptions of numerous deals that involved TWC, *see* Susan Crawford, *Captive Audience: The Telecom Industry and Monopoly Power in the New Gilded Age* 64-85 (2013).

largest cable provider.[3] In addition, both companies are vertically integrated and control valuable content—content that competes directly with that offered by nascent and established online content distributors. These crucial facts provide the foundation for the significant public interest concerns raised by the unprecedented amalgamation of broadband subscribers, as the transaction contemplates.

First, a merger of Comcast and TWC would exacerbate Comcast's existing vertical incentives to disadvantage online video distribution ("OVD") providers and rival content providers. The Commission explicitly recognized these incentives when Comcast acquired NBC Universal and, at that time, greatly increased its vertical integration. That acquisition was supposed to be conditioned on terms that would prevent Comcast from being able to act on its changed incentives in ways contrary to the public interest. However, Comcast has developed an easy work-around to avoid the requirements it reluctantly accepted to gain the Commission's approval of the NBC Universal acquisition. While Comcast cannot discriminate against Internet content *within* its network, Comcast has unfettered discretion to negotiate the terms of its interconnection agreements with other networks and edge providers that wish to connect with it. This means that Comcast can charge separate and distinct rates for interconnection agreements with different edge providers—effectively allowing it to charge discriminatory pricing to those that it deems a threat to its business. If edge providers do not agree to interconnect directly with Comcast, they must purchase transit[4] from a Tier 1 backbone provider that does peer with

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[3] *See* Declaration of Joseph Farrell, DPhil, Professor of Economics, University of California, Berkeley, ¶ 92, Figure 5 ("Farrell Decl.").

[4] Transit is "the business relationship whereby an Internet Service Provider provides (usually sells) access to the global Internet." William B. Norton, *The Internet Peering Playbook: Connecting to the Core of the Internet* 7 (2014); *see also* Declaration of Henry (Hank) Kilmer, Vice President of IP Engineering, Cogent Communications Group, Inc., ¶ 12 ("Kilmer Decl.").

Comcast. However, Comcast has effectively demonstrated that it can selectively congest connections with Tier 1 providers. Most prominently, it has done so with several Tier 1 providers that Netflix has used to access Comcast's customers. Of course, the only way an edge provider can reach Comcast's customers is by connecting, directly or indirectly, with Comcast's network. Comcast's incentives to target additional edge providers after this transaction—including innovative start-ups—will only increase once it has millions of additional subscribers to whom it wishes to sell its own vertically integrated services.

Second, the merger would strengthen Comcast's ability to raise prices for access to its augmented base of broadband Internet subscribers. As a result of its current size and locked-in residential customers, Comcast has already begun to change pricing for connecting to its network. For the last two-and-a-half decades, the cost of Internet access for edge providers has been driven by the low, competitive prices charged by Tier 1 providers for transit—providers who trace their lineage back to the founding networks of the commercial Internet.[5] That paradigm fostered the emergence of new and disruptive applications that have changed how consumers use the Internet for civic and social engagement, entertainment and commerce. The perpetuation of this model, notwithstanding ever-increasing consumer appetite for bandwidth-intensive applications, is not inevitable. In particular, the dynamic Internet that has become the essential communications network of the modern age is threatened by the level of concentration the transaction portends. The warning signs are already present on both sides of the two-sided market in which Comcast operates. To its residential customers, it charges prices and offers a quality of service consistent with the degree of market power and the lack of competition it

[5] *See* Kilmer Decl. ¶¶ 13, 30-41.

already enjoys (making it the most hated company in America).[6] To those who need to reach Comcast's network as a gateway to its captive customers—such as other networks and edge providers—Comcast is devising new means to extract payments simply for delivering the Internet content that Comcast's own customers request and for which they already pay Comcast. As discussed in the accompanying declaration of Dr. Joseph Farrell, the former chief economist at the DOJ, FCC, and FTC, Comcast's incentives and ability to engage in this type of conduct—incentives that already were augmented by the NBC Universal transaction—will only be further exacerbated by the addition of millions of TWC captive broadband customers and TWC programming assets.[7]

Third, these concerns are not mitigated by Comcast's attempts to assuage the Commission and others by pointing to purported merger-specific efficiencies and benefits from the combination of the two companies. Even if these arguments had merit (which they do not), they would be insufficient to offset the manifest public interest harms presented by the transaction.

The transaction brings the Commission to a critical decision point. The transaction, as proposed by the parties, poses grave public interest concerns. Antitrust principles alone provide ample grounds for denying the applications. The Commission's mandate, however, is broader. In order to approve the applications before it, the Commission must find that such approval would be consistent with the public interest. As explained in more detail below and in the accompanying declarations, the concentration of so many millions of broadband Internet

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[6] Brad Reed, *Massive survey finds Comcast and TWC are the two most hated companies in America – period*, BGR (May 20, 2014), http://bgr.com/2014/05/20/comcast-twc-customer-satisfaction-survey-study/.

[7] *See* Farrell Decl. ¶¶ 1-14.

subscribers in one firm—particularly a firm with the incentives to limit the competitive vitality of those who threaten its proprietary content offerings—cannot meet that test. Unless the Commission imposes meaningful and targeted conditions that address the specific threats posed by the transaction, Cogent submits that the Commission must deny the pending applications as contrary to the public interest.

II. Legal Standard

Sections 214(a) and 310(d) of the Communications Act of 1934, as amended, ("Communications Act" or "Act") require the Commission to determine whether "the Applicants have demonstrated that, on balance, the merger will serve the public interest and convenience."[8] In making this determination, the Commission's analysis "encompasses an examination of anticompetitive effects but also evaluates . . . the potential impact of the proposed transaction on the rules, policies, and objectives of the Communications Act."[9] Objectives of the Act include "a deeply rooted preference for preserving and enhancing competition in relevant markets, accelerating private-sector deployment of advanced services, [and] ensuring a diversity of information sources and services to the public."[10] In evaluating transfer applications, the

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[8] *In the Matter of Applications for Consent to the Transfer of Control of Licenses & Section 214 Authorizations by Time Warner Inc. & America Online, Inc., Transferors, to AOL Time Warner Inc., Transferee*, CS Docket No. 00-30, Mem. Op. & Order, 16 FCC Rcd 6547, 6554 ¶ 19 (2001) ("*AOL/Time Warner Order*").

[9] *Id.* at 6550 ¶ 4. Under antitrust jurisprudence, anticompetitive effects are assessed under the framework set forth in the Horizontal Merger Guidelines, U.S. Dep't of Justice & Fed. Trade Comm'n, Aug. 19, 2010 ("Horizontal Merger Guidelines"), *available at* http://www.justice.gov/atr/public/guidelines/hmg-2010.pdf (last visited Aug. 18, 2014).

[10] *In the Matter of Applications of Comcast Corp., Gen. Elec. Co. & NBC Universal, Inc.*, MB Docket No. 10-56, Mem. Op. & Order, 26 FCC Rcd 4238, 4248 ¶ 23 (2011) ("*Comcast/NBC Universal Order*"); *see also AOL/Time Warner Order* at 6550 ¶ 4 (listing, as major objective of the Act, "providing enhanced telecommunications services to all Americans as quickly as possible"). The Act defines "advanced telecommunications capability" to include "broadband telecommunications capability." 47 U.S.C. § 1302(d).

Commission employs "a balancing test weighing any potential public interest harms of the proposed transaction against the potential public interest benefits. The applicants bear the burden of proving, by a preponderance of the evidence, that the proposed transaction, on balance, will serve the public interest."[11] If the Commission is "unable to find that the proposed transaction serves the public interest, or if the record presents a substantial or material question of fact, section 309(e) of the Act requires that [the Commission] designate the application for hearing."[12]

Furthermore, the Commission's broad, public interest authority enables it to, consistent with its extensive regulatory and enforcement experience, "impose and enforce narrowly tailored, transaction-specific conditions to ensure that the public interest is served" and that "public convenience and necessity may require."[13]

III. The Combined Entity Would Have Greater Incentive to Foreclose Entrants that Compete with its Vertically Integrated Businesses

Comcast and TWC both own and operate entities that generate video content, as well as offer proprietary on-demand video services.[14] As a result, both have vertical incentives to

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[11] *In the Matter of SBC Commc'ns Inc. & AT&T Corp. Applications for Approval of Transfer of Control*, WC Docket No. 05-65, Mem. Op. & Order, 20 FCC Rcd 18290, 18300 ¶ 16 (2005) ("*SBC/AT&T Order*"); *see also Comcast/NBC Universal Order* at 4247 ¶ 22 ("The Applicants bear the burden of proving, by a preponderance of the evidence, that the proposed transaction, on balance, serves the public interest."); *In the Matter of Applications filed by Global Crossing Ltd. and Level 3 Commc'ns, Inc. for Consent to Transfer Control*, IB Docket No. 11-78, Mem. Op. & Order & Declaratory Ruling, 26 FCC Rcd 14056, 14061 ¶¶ 10 (2011) ("*Global Crossing/Level 3 Order*").

[12] *SBC/AT&T Order* at 18301 ¶ 16 n.63.

[13] *Global Crossing/Level 3 Order* at 14063-64 ¶ 13; *see also Comcast/NBC Universal Order* at 4249 ¶ 25.

[14] *See In the Matter of Applications of Comcast Corp. & Time Warner Cable Inc. For Consent To Transfer Control of Licenses and Authorizations*, MB Docket No. 14-57, Application and Public Interest Statement (filed Apr. 8, 2014) at 16 & Ex. 8 ("Comcast/TWC Application") (listing TWC's programming interests); *Examining the Comcast-Time Warner Cable Merger and the Impact on Consumers Before the S. Comm. on the Judiciary*, 113th Cong. (Apr. 9, 2014), Statement of Gene Kimmelman, President & CEO, Public Knowledge, at 5 ("Kimmelman Statement") *available at*

disadvantage competing content providers and online video distributors. In particular, Comcast's acquisition of NBC Universal has fundamentally changed its makeup and incentives with respect to the provision and distribution of video to residential consumers.[15] More

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http://www.judiciary.senate.gov/imo/media/doc/04-09-14KimmelmanTestimony.pdf (last visited Aug. 19, 2014) ("Time Warner Cable is a vertically-integrated company itself. Time Warner Cable controls three major sports networks in Los Angeles alone (Time Warner Cable SportsNet, Time Warner Cable Deportes, and SportsnetLA), manages 26 local news channels, 16 local sports channels, and ten 'lifestyle' channels.") (citing Time Warner Cable, SEC Form 10-K (Feb. 18, 2014), at 5).

[15] The vertical incentives that gave rise to public interest concerns in the context of the Comcast/NBC Universal transaction only have increased in the intervening years. For example, in just that short period, the importance of streaming video to consumers, and its threat to MVPDs' own programming and video services, has grown. *See* Kilmer Decl. ¶ 46 (video has gone from 30% of Internet traffic in 2009 to 66% of Internet traffic in 2013); Farrell Decl. ¶¶ 29-32 (summarizing evidence of trend toward increasing usage and reliance on bandwidth-intensive applications); Sandvine, *Global Internet Phenomena Report: 1H 2014*, at 5, *available at* https://www.sandvine.com/downloads/general/global-internet-phenomena/2014/1h-2014-global-internet-phenomena-report.pdf (last visited Aug. 19, 2014) (reporting that real-time entertainment constitutes approximately 63% of peak period Internet traffic in North America and that "cord cutters" consume eleven times as much streaming content over typical Internet users; further reporting that per subscriber bandwidth usage in North America has nearly doubled from 2011—when Comcast completed its acquisition of NBC Universal—to the present); Amol Sharma & Michael Calia, *Viacom, Google Bury the Hatchet Over YouTube*, Wall Street J. (Mar. 18, 2014), http://online.wsj.com/news/articles/SB10001424052702303563304579446980859743564?KEYWORDS=bury+the+hatchet&mg=reno64-wsj ("YouTube now has more than one billion unique visitors a month. Some 100 hours of video are uploaded to it every minute, Google says."); T.C. Sottek, *Netflix challenges the TV establishment with Emmy wins for 'House of Cards,'* The Verge (Sept. 23, 2013), http://www.theverge.com/2013/9/22/4759754/netflix-challenges-the-tv-establishment-with-emmy-wins-for-house-of (in 2013, original Netflix programming earned 14 Emmy nominations, House of Cards won best directing in a drama series Emmy, and Netflix plans to produce at least five original series per year and budgeted $300 million for original series *House of Cards*, *Hemlock Grove*, and *Orange Is The New Black*); Bill Carter, *Emmy Nominations Cross a Few Lines*, N.Y. Times (July 10, 2014), http://www.nytimes.com/2014/07/11/arts/television/2014-emmy-nominations-game-of-thrones-true-detective-among-the-honored.html (reporting that Netflix received 31 Emmy nominations in 2014, including 13 for *House of Cards* and 12 for *Orange Is The New Black*); Andrea Peterson, *The $4.38 billion reason it's so hard for U.S. cord-cutters to watch the Olympics online*, Wash. Post (Feb. 6, 2014), http://www.washingtonpost.com/blogs/the-switch/wp/2014/02/06/the-4-38-billion-reason-its-so-hard-for-u-s-cord-cutters-to-watch-olympics-online/ ("[W]hile NBC is streaming all of the events live online, full access to the livestream will only be available to paying cable subscribers."); William Launder, *TV Stations Face New FCC Rules*, Wall Street J. (Feb. 26, 2014), http://online.wsj.com/news/articles/SB10001424052702304071004579407581430183514?KEYWORDS=tv+stations+face+new+fcc+rules&mg=reno64-wsj (in defending joint sales agreements, broadcasters have made the point that such arrangements "help[] them compete with online video outlets and cable channels").

importantly, because the *Comcast/NBC Universal Order* did not prevent Comcast from discriminating against content providers at the interconnection points between its network and others, there continue to be very real risks of harm to OVDs and other Internet startups that may threaten Comcast's business model. If permitted, the transaction will only heighten these risks because the combined company's integration of video assets, coupled with a substantially larger base of subscribers, will magnify the adverse effects of the post-transaction entity acting on such incentives.

The Commission, the Department of Justice, and the U.S. Court of Appeals for the D.C. Circuit all have recognized the competitive issues raised by the combination of vertically integrated content and control over broadband Internet access:

- "AT&T could profit from the creation and exercise of such market power either through direct ownership of a favored [service], or by obtaining payments from favored [services] in exchange for favorable treatment by [its broadband services]. By exploiting its 'gatekeeper' position in the residential broadband content market AT&T could make it less profitable for unaffiliated or disfavored [services] to invest in the creation of attractive broadband content, and thereby reduce the quantity and quality of content available."[16]

- "[W]e have concerns that the merger may give AOL Time Warner the ability and the incentive to discriminate against the interactive television . . . services of unaffiliated video programming networks . . . ."[17]

- "Today, broadband providers have incentives to interfere with the operation of third-party Internet-based services that

[16] *United States v. AT&T*, Case No. 1:00-cv-01176, Complaint at 12-13 ¶ 34 (D.D.C. May 25, 2000) ("AT&T Complaint"). At the time, AT&T was attempting to merge two cable networks that were subsequently acquired by Comcast in 2002.

[17] *AOL/Time Warner Order* at 6554 ¶ 18.

compete with the providers' revenue-generating telephony and/or pay-television services."[18]

- "OVDs would be harmed competitively if ISPs that are also MVPDs (*e.g.*, cable companies, telcos) were to impair or delay the delivery of video because OVDs pose a threat to those MVPDs' traditional video programming distribution businesses. Because Comcast is the country's largest ISP, an inherent conflict exists between Comcast's provision of broadband services to its customers, who may use this service to view video programming provided by OVDs, and its desire to continue to sell them MVPD services."[19]

- "[W]e also identify particular transaction-related harms that arise from the increased risk that Comcast will engage in blocking or discrimination when transmitting network traffic over its broadband service. Specifically, we find that Comcast's acquisition of additional programming content that may be delivered via the Internet, or for which other providers' Internet-delivered content may be a substitute, will increase Comcast's incentive to discriminate against unaffiliated content and distributors in its exercise of control over consumers' broadband connections."[20]

- "Equally important, the Commission has adequately supported and explained its conclusion that, absent rules such as those set forth in the *Open Internet Order*, broadband providers represent a threat to Internet openness and could act in ways that would ultimately inhibit the speed and extent of future broadband deployment. First, nothing in the record gives us any reason to doubt the Commission's determination that broadband providers may be motivated to discriminate against and among edge providers."[21]

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[18] *In the Matter of Preserving the Open Internet; Broadband Indus. Practices*, GN Docket No. 09-191, WC Docket No. 07-52, Report & Order, 25 FCC Rcd 17905, 17916 ¶ 22 (2010) ("*Open Internet Order*").

[19] *United States v. Comcast Corp.*, Case No. 1:11-cv-00106, Competitive Impact Statement at 11 (D.D.C. Jan. 18, 2011).

[20] *Comcast/NBC Universal Order* at 4275 ¶ 93.

[21] *Verizon v. F.C.C.*, 740 F.3d 623, 645 (D.C. Cir. 2014).

These quotations all relate to enforcement actions and a rulemaking that collectively span the last fifteen years, and all involve cable companies that are now part of the contemplated transaction.

The various vertical harms that could result from Comcast acquiring NBC Universal were clearly enumerated in the Commission's order approving the applications associated with that transaction.[22] However, although those harms were supposed to be addressed through a variety of provisions in the *Comcast/NBC Universal Order*, including the conditions contained therein, Comcast has been able to take advantage of a glaring omission. The Commission's order did not address Comcast's practices with respect to interconnection with other Internet networks.[23] As a result, Comcast has been able to force edge providers like Netflix to negotiate separate paid peering agreements with it.

The two most relevant forms of protection the *Comcast/NBC Universal Order* provided edge providers were:

> ! A clause preventing Comcast from engaging in "unfair methods of competition or deceptive acts or practices, the purpose or effect of which is to hinder significantly or prevent any MVPD or OVD from providing Video Programming online to subscribers or consumers"[24] and

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[22] *See* Jonathan Baker, *Comcast/NBCU: The FCC Provides a Roadmap for Vertical Merger Analysis*, 25 Antitrust 36, 37 (Spring 2011).

[23] Cogent believes that certain provisions of Comcast's consent decree with the DOJ arising out of the Comcast/NBC Universal transaction reasonably can be interpreted to proscribe the type of interconnection practices in which Comcast has engaged. Comcast disagrees. *See* Letter from Robert N. Beury, Jr., Chief Legal Officer, Cogent Commc'ns Grp., to Arthur R. Block, Gen. Counsel, Comcast Corp. (June 14, 2013) (Ex. 1 to Kilmer Decl.) ("Beury Letter"); Letter from Arthur R. Block, Gen. Counsel, Comcast Corp., to Robert N. Beury, Jr., Chief Legal Officer, Cogent Comm'cns Grp. (June 20, 2013) (Ex. 2 to Kilmer Decl.) ("Block Letter"). This disagreement underscores the need, should the transaction be approved, for unambiguous conditions that address interconnection issues. *See* Section VI, *infra*.

[24] *Comcast/NBC Universal Order*, App'x A at 4363.

- A commitment by Comcast to abide by the *Open Internet Order*.[25]

These provisions have had no effect on the strategy that Comcast has developed to selectively negotiate individual paid peering arrangements with edge providers.

As described in greater detail in section IV below, Comcast's strategy is to require paid peering arrangements for certain entities that wish to reach Comcast broadband subscribers. In theory, absent a paid peering arrangement with Comcast, edge providers should still be able to access Comcast customers through other means. Comcast maintains either transit agreements or settlement-free peering agreements with a number of Tier 1 backbone providers, so edge providers ostensibly can access Comcast's network through those connections. As such, Comcast can argue that there is no discrimination. However, the availability of that option is predicated on the assumption that Comcast is unable or unwilling to degrade its interconnections with other networks (for example, by refusing to augment interconnection ports). In practice, that assumption has not borne out.

Comcast, in fact, has a history of creating congestion at its interconnection points with Tier 1 providers by failing to augment port capacity between the networks as traffic increases. The standard industry practice is to upgrade ports and cross-connects with a Tier 1 provider when they reach about 70% capacity at peak times.[26] But the decision whether to augment ports

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[25] *Comcast/NBC Universal Order* at 4275 ¶ 94. Comcast has also committed that the merged entity will comply with the *Open Internet Order*, but that promise is as empty as the initial commitment in the Comcast/NBC Universal application—without more, Comcast would still be able to use the strategy described here to discriminate. *See* Comcast/TWC Application at 59.

[26] Kilmer Decl. ¶ 16 ("Networks generally expect that . . . both sides commit to upgrade connections when they reach approximately 70% capacity, though discussions and negotiations typically begin prior to capacity reaching that level."); Norton, *The Internet Peering Playbook*, at 94 ("Since Private Peering involves only the two parties, when the port reaches an agreed-upon utilization (say 60% utilization, for example) both parties can see that it is time to upgrade the peering session.").

with a peering partner is currently governed only by private peering agreements that are not regulated by the FCC or the subject of any requirements attributable to the *Comcast/NBC Universal Order*. Thus, Comcast has the unilateral discretion, which it has elected to exercise, to run its ports with Tier 1 providers at capacity. The impact of this decision is felt directly by Comcast's own subscribers, as their ability to enjoy bandwidth-intensive and latency-sensitive content like streaming video and VoIP—while congested ports lead to dropped packets and jitter—is compromised.[27]

To date, based on public reports and Cogent's own experience, it appears that Comcast has deliberately run its ports at capacity with at least three Tier 1 providers—Tata,[28] Level 3,[29] and Cogent.[30] While Cogent does not have direct visibility into Tata's and Level 3's experiences regarding congestion with Comcast, public reports suggest they are similar to Cogent's experience.[31] Comcast has argued that its decisions whether to enter into paid or settlement-free peering arrangements, and the terms thereof, including whether to upgrade ports, are private commercial agreements, not governed by either the FCC's *Open Internet* rules or the *Comcast/NBC Universal Order*.[32]

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[27] Kilmer Decl. ¶ 68; Comments of Netflix, Inc., GN Docket Nos. 14-28 and 10-127 (filed July 15, 2014), at 13-14 ("Netflix July 15, 2014 Comments").

[28] Gregory Rose, *The Economics of Internet Interconnection: Insights from the Comcast-Level 3 Peering Dispute* 5 (Mar. 28, 2011) *available at* http://apps.fcc.gov/ecfs/document/view?id=7021239465 (last visited Aug. 18, 2014); Norton, *The Internet Peering Playbook*, at 206.

[29] Letter from Joseph C. Cavender, Level 3, to Marlene H. Dortch, Secretary, FCC, GN Docket Nos. 14-28 & 09-191 (Apr. 24, 2014).

[30] Kilmer Decl. ¶¶ 61-68.

[31] For an analysis of Cogent's experience and its practical ramifications on edge providers' ability to provide content to Comcast's customers, *see* Kilmer Decl. ¶¶ 61-68 and Farrell Decl. ¶¶ 130-146.

[32] *See* Letter from Lynn Charytan, Vice President, Comcast, to Marlene H. Dortch, Secretary, FCC, MB Docket No. 10-56 (Dec. 17, 2010), at 3-4; Joe Waz, *20 Q's – with accurate A's – about Level 3's peering dispute*, Comcast (Dec. 7, 2010), http://corporate.comcast.com/comcast-voices/20-qs-with-

As a result, Comcast already has not only the incentive, but the clear ability, to disadvantage edge providers through "private" arrangements not currently subject to Commission oversight. More importantly for present purposes, the transaction will significantly increase the incentives for a combined Comcast/TWC to:

- Manage its broadband network in ways that, whether directly or indirectly, favor content to which it grants "special access" as a result of deals it executes with particular content providers.

- Use its broadband network management practices to discriminate, whether directly or indirectly, against content that it deems to pose a competitive threat to its own content. New and innovative OVDs, along with other emerging bandwidth-intensive applications, will be particularly at risk if a precondition to compete or achieve critical scale is gaining "special access."

In his declaration, Dr. Farrell explains how the transaction will change incentives "by expanding the merged parties' footprint."[33] In order to engage in discrimination, Comcast has to assess the potential costs, such as regulatory penalties and degradation to its customer base, against the potential benefits gained from, for example, disadvantaging a competitor.[34] By acquiring the next largest cable company, Comcast will "internalize a greater proportion of the anticompetitive benefits, which will increase its incentive to engage in such strategies."[35] As explained in section IV, not only will the proposed transaction increase Comcast's incentives, it will also increase Comcast's ability to engage in this conduct.

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accurate-as-about-level-3s-peering-dispute; *see also* Block Letter at 2 (Ex. 2 to Kilmer Decl.); Letter from John Ryan, Exec. Vice President and Chief Legal Officer, to Julius Genachowski, Chairman, FCC, GN Docket No. 09-191 (Feb. 17, 2011), at 2 ("Ryan Letter") (summarizing Chairman Genachowski's testimony before the House Communications and Internet Subcommittee in which he stated that the *Open Internet Order* "doesn't change anything with respect to existing peering arrangements").

33 Farrell Decl. ¶ 78.

34 *Id.* ¶ 79.

35 *Id.* ¶ 80; *see also id.* ¶¶ 81-83.

IV. The Transaction Would Enable the Combined Entity to Raise Prices for Access to its Millions of Broadband Internet Subscribers

Comcast has sought to distract attention from the adverse effects of the proposed transaction by stressing the lack of existing horizontal competition with TWC in the provision of broadband Internet access to residential subscribers. Cogent does not dispute that Comcast's acquisition of yet another cable company will not decrease actual horizontal competition for the provision of cable broadband services to residential subscribers, as no such competition between Comcast and TWC exists today.[36] Comcast's argument, however, ignores the other side of the two-sided market: the provision of Internet access to networks and edge providers that must connect with Comcast and TWC if they want to reach each ISP's subscribers.[37]

The AT&T/MediaOne merger presented similar concerns in 2000. AT&T controlled the broadband service Excite@Home and MediaOne held a roughly one-third interest in the broadband service Road Runner.[38] Excite@Home had exclusive rights to provide residential broadband services for three cable operators, AT&T, Comcast, and Cox. Road Runner had exclusive rights to provide residential broadband services for MediaOne and Time Warner, Inc. Collectively, they represented approximately 40% of broadband subscribers in the U.S. at that

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[36] Moreover, looking at only the geographic overlap in service areas takes too limited a view of horizontal competition. In particular, the merger would eliminate both potential competition and yardstick competition between Comcast and TWC. Farrell Decl. ¶¶ 87-100.

[37] *See id*. ¶¶ 26-28 (explaining how an appropriate economic analysis should focus on both the market for broadband consumers and the market for delivery of content to ISP subscribers); Irvin M. Stelzer, *King Cable: The Comcast-Time Warner combination deserves close scrutiny,* The Weekly Standard (Mar. 17, 2014), http://www.weeklystandard.com/articles/king-cable_784286.html?page=1 ("A combination of these companies might not reduce the number of delivery systems available to consumers in any zip code, as Comcast argues, but it would reduce the market for innovations by increasing the size of the sunk investment to be protected, and make it more difficult for providers of content for the combination's digital pipes to compete with content provided by the new powerhouse.").

[38] *United States v. AT&T,* Case No. 1:00-cv-01176, Competitive Impact Statement, at 4-5 (D.D.C. May 25, 2000) ("AT&T/MediaOne Competitive Impact Statement"). DOJ treated MediaOne's ownership interest as a sufficient interest to create concerns that the combined entities would behave as if they were under common control. *Id*. at 11-12.

time.[39] DOJ required a divestiture that maintained independent broadband networks as a condition of permitting the AT&T/MediaOne merger. Today, all of the broadband Internet businesses at issue in AT&T/MediaOne (with the exception of Cox's broadband Internet business) are now owned by Comcast and TWC.[40] Even more striking, although broadband service has dramatically increased in importance since 2000, and despite the absence of Cox, the merging parties' combined share of the nation's residential broadband subscribers is roughly equivalent to the combined share at issue in AT&T/MediaOne.[41]

At the time of the AT&T/MediaOne deal, DOJ concluded that there were *horizontal* concerns related to the market for "aggregation, promotion, and distribution of broadband content and services."[42] DOJ principally focused on two aspects of services that the parties provided to edge providers. First, DOJ focused on the "portals"—the first pages that consumers would see when they accessed the Internet—that Road Runner and Excite@Home made available to residential consumers. Comcast also sold access to these portals to edge providers.[43] The importance of portals has diminished as websites like Yahoo, Google, and Bing, among others, are now home pages used by many residential consumers.

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[39] AT&T/MediaOne Complaint ¶¶ 6, 9. Cable represented 70% of the broadband market (DSL was the only other high-speed Internet technology available at the time) and combined, Road Runner and Excite@Home had 60% of the cable subscribers and a "significant majority of the nation's residential broadband users." *Id*. ¶¶ 6, 9, 20-21.

[40] After the AT&T/MediaOne transaction was approved, Comcast acquired AT&T's cable business (with some divestitures to Time Warner, Inc.). *In the Matter of Applications for Consent to the Transfer of Control of Licenses from Comcast Corp. & AT&T Corp., Transferors, to AT&T Comcast Corp., Transferee*, MB Docket No. 02-70, Mem. Op. & Order, 17 FCC Rcd 23246, 23247-50 ¶¶ 1-10 (2002) ("*Comcast-AT&T Order*").

[41] Comcast's national post-transaction share will be approximately 35% for wireline broadband services (including DSL) and 60% for cable broadband services. Farrell Decl. ¶ 92, Figure 5. Given the increasingly diminishing significance of DSL, a reasonable approximation of Comcast's share is greater than 40%. *See infra* notes 55-57 and accompanying text; Farrell Decl. ¶¶ 37, 59.

[42] AT&T/MediaOne Competitive Impact Statement at 9.

[43] *Id*.

The other facet of the service on which DOJ focused was "network services such as caching that will facilitate the distribution of their data so as to enhance the quality and accessibility of their content."[44] This aspect of the service is essentially the same form of alleged consideration (*i.e.*, improved data distribution) that Comcast provides edge providers today in exchange for the payment it receives under paid peering agreements.

DOJ concluded:

> If the proposed merger were consummated, concentration in the market for aggregation, promotion, and distribution of residential broadband content and services would be substantially increased, and competition between Excite@Home and Road Runner in the provision of such services may be substantially lessened or even eliminated. Through its control of Excite@Home and substantial influence or control of Road Runner, AT&T would have substantially increased its leverage in dealing with broadband content providers, which it could use to extract more favorable terms for such services.[45]

DOJ presented a simple, horizontal theory of unilateral effects resulting from the transaction. Despite Comcast's protestations to the contrary, the current transaction presents precisely the same principal concern—that the increase in concentration will create increased bargaining leverage for the combined Comcast/TWC.

In fact, Comcast's own representations in this proceeding about the effects of requiring the merged firm to sever TWC's relationship with Bright House (in order to comply with the cable horizontal ownership cap) prove this point. Bright House is a cable company in Florida that is partially owned by TWC. Bright House also has an agreement with TWC that gives Bright House "the opportunity to acquire equipment and third-party programming on a joint basis" with TWC and permits Bright House to rely on TWC "for certain inputs into its

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44 AT&T/MediaOne Competitive Impact Statement at 10.

45 *Id*. at 12.

broadband Internet access services—including backbone/transit services and the Road Runner e-mail service and web portal."[46] In appealing to the Commission for permission to acquire TWC's interest in and relationship with Bright House, Comcast has warned of the effects of divorcing Bright House from TWC's negotiating power.[47]

Although the implications of the transaction for increased leverage are at least as important as they were in 2000, in the years since AT&T/MediaOne some things have changed, all of which exacerbate the adverse effects of this merger:

- The cable industry has significantly consolidated—at the time, all five participating cable companies were independent competitors that had granted exclusive licenses to Excite@Home or Road Runner; if the current transaction is permitted, all but one of those cable companies will be owned by Comcast.

- The current transaction does not involve an acquisition of partial ownership; it would confer complete ownership on Comcast.

- At the time, there was some doubt about the extent to which DSL would become a significant competitor to cable broadband. That doubt no longer exists today.[48]

The last point stands out particularly in the FCC's review of the AT&T/MediaOne transaction. Even though the FCC examined the transaction with the expectation that AT&T would divest MediaOne's interest in Road Runner, it *still* considered whether additional relief was necessary, but ultimately concluded:

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[46] Letter from Kathryn A. Zachem, Senior Vice President, Comcast Corp., et al. to Marlene H. Dortch, Secretary, FCC, GN Docket No. 14-57 (June 24, 2014) at 10-11.

[47] *Id*. at 12 n.29 (acknowledging that terminating TWC's services to and agreements with Bright House would cause Bright House to lose "the material benefits such agreements provide, including possibly raising costs for its customers and hampering its ability to compete effectively").

[48] *See infra* notes 55-57 and accompanying text; Farrell Decl. ¶¶ 37, 59.

> We find it unnecessary to determine in this proceeding whether a distinct broadband Internet access market exists, notwithstanding the rigorous debate on the record . . . We agree with commenters that the proposed merger conceivably could undermine competition and diversity in the emerging broadband Internet arena, *if* customers did not have the ability to choose among viable, alternative broadband Internet access providers or ISPs. However we find that those harms will be avoided if: (a) consumers can choose among various alternative broadband access providers, such as DSL, wireless, and satellite; or (b) unaffiliated ISPs are permitted access to the merged firm's cable network.[49]

Today, both bases for the Commission's optimism that competitive harms could be avoided have proven to be misplaced: (a) many consumers cannot choose among various alternative broadband technologies, and (b) unaffiliated ISPs will not have access to the merged firm's network.

A. Most Consumers do not Have Meaningful Alternatives to Cable Broadband

In AT&T/MediaOne, the Commission correctly focused on the extent to which customers are locked in to service from a particular broadband provider. To the extent they are, consumers are single-homed, *i.e.*, there is only one way to reach them on the Internet.[50] The Commission's optimism in 2000 regarding competing broadband technologies in AT&T/MediaOne stands in stark contrast to its statement on the subject a decade later in the *Open Internet Order*. There, in 2010, the Commission concluded that "[t]he risk of market power is highest in markets with few competitors, and most residential end users today have only one or two choices for wireline broadband Internet access service."[51] The outlook remains equally, if not more, bleak when non-

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[49] *In the Matter of Applications for Consent to the Transfer of Control of Licenses & Section 214 Authorizations from MediaOne Grp., Inc. to AT&T Corp.*, CS Docket No. 99-251, Mem. Op. & Order, 15 FCC Rcd 9816, 9866 ¶ 116 (2000) ("*AT&T/MediaOne Order*").

[50] *See* Comments of Level 3 Commc'ns, LLC, GN Docket No. 14-28 (filed July 15, 2014), at 3 ("Level 3 July 15, 2014 Comments").

[51] *Open Internet Order* at 17923 ¶ 32; *see also* Kilmer Decl. ¶ 53.

wireline technologies such as mobile[52] and satellite[53] are considered. As one former Comcast customer service representative recently observed, mobile, DSL, and satellite services are "hardly worth the money" as compared to cable broadband Internet. As a result, Comcast "has little incentive to provide you with decent service. Who are you going to run to when you disconnect your service? Nobody, and they know it."[54]

The principal wireline alternative to cable is DSL, which, in most cases, proves to be a significantly inferior alternative to cable broadband. Netflix rates the streaming speeds for its customers by broadband provider and technology, and Verizon and AT&T DSL consistently rank near the bottom.[55] The transfer speed for DSL is low enough that, in some cases, DSL does not meet Netflix's recommended speeds for viewing movies in high-definition.[56] DSL also has lower bandwidth than cable today and cannot easily be upgraded. Upgrades are thus costly and

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[52] *Open Internet Order* at 17924 ¶ 33; *see also* Farrell Decl. ¶¶ 38, 41-48; Kilmer Decl. ¶ 52. Mobile providers themselves also suggest that they are not meaningful alternatives to wireline broadband. *See* Comments of T-Mobile USA, Inc., GN Docket Nos. 14-28 and 10-127 (filed July 18, 2014), at 5-6 ("The *Open Internet Order* correctly recognized that 'mobile networks present operational constraints that fixed broadband networks do not typically encounter . . . The distinctions between fixed and mobile networks persist and, if anything, have become even more significant as mobile broadband usage has grown."); Comments of Verizon & Verizon Wireless, GN Docket Nos. 14-28 and 10-127 (filed July 15, 2014) ("Mobile broadband remains a nascent technology, and will only become a true competitor to fixed service following substantial investment, development, and innovation."); Chris Ziegler, *Comcast's claim that LTE competes with cable modems is 'a little bit of a stretch,' says Verizon Wireless CEO*, The Verge (Aug. 4, 2014), http://www.theverge.com/2014/8/4/5968545/comcasts-claim-that-lte-competes-with-cable-modems-is-a-little-bit-of-a-stretch.

[53] *See* Kilmer Decl. ¶ 51; *see also* Farrell Decl. ¶¶ 41-48.

[54] Adrianne Jeffries, *The worst company in America*, The Verge (Aug. 19, 2014), http://www.theverge.com/2014/8/19/6004131/comcast-the-worst-company-in-america.

[55] *See, e.g.*, Netflix, USA ISP Speed Index (July 2014), http://ispspeedindex.netflix.com/usa (ranking AT&T and Verizon DSL at 15 and 16, respectively); Netflix, USA ISP Speed Index (Feb. 2014), http://ispspeedindex.netflix.com/results/usa/archives?field_date_value%5Bvalue%5D%5Byear%5D=2014&field_date_value%5Bvalue%5D%5Bmonth%5D=2 (ranking AT&T and Verizon DSL and 14 and 16, respectively); Farrell Decl. ¶ 142, Figure 15.

[56] *See* Farrell Decl. ¶¶ 34, 36-37.

are unlikely to be implemented as a result.[57] In short, the ability for DSL to remain a significant competitor, and thus a meaningful competitive constraint to cable, is in real doubt.

The other potential wireline alternative is fiber. Fiber has greater bandwidth and in theory could provide a significant alternative. However, to date, the deployment of fiber has been relatively limited. As a result, the degree to which fiber will prove to be a wide-scale alternative to cable is unknown.[58]

Further reducing competitive options, even those consumers who do have meaningful alternatives may not be willing to switch broadband providers for a variety of reasons:

> [E]nd users . . . that can switch broadband providers may not benefit from switching if rival broadband providers charge edge providers similarly. Further, end users may not know whether charges or service levels their broadband provider is imposing on edge providers vary from those of alternative broadband providers, and even if they do have this information, may find it costly to switch. For these reasons, a dissatisfied end user, observing that some edge provider services are subject to low transmission quality, might not switch broadband providers (though they may switch to a rival edge provider in the hope of improving quality).[59]

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[57] 2014 Measuring Broadband America Fixed Broadband Report at 14, *available at* http://data.fcc.gov/download/measuring-broadband-america/2014/2014-Fixed-Measuring-Broadband-America-Report.pdf (last visited Aug. 19, 2014); *see also* Farrell Decl. ¶ 36 and Figure 3 (summarizing broadband speeds).

[58] *See* Kilmer Decl. ¶ 50; Jeffries, *The worst company in America*, The Verge (noting that Verizon FiOS, with 5.9 million customers, has stopped expanding its fiber footprint, and that Google Fiber and AT&T GigaPower are, together, available only in five U.S. cities). AT&T's recent announcement about expanding its fiber service to a handful of new cities does not change the fundamental point. *See* Thomas Gryta, *AT&T Gigabit Service to Land on Google's Turf*, Wall Street J. (Aug. 20, 2014), http://online.wsj.com/articles/at-t-to-wire-cupertino-with-gigabit-network-1408507449.

[59] *Open Internet* Order at 17921 ¶ 27. For an anecdotal example of one customer's experience switching from Comcast, *see* Brian Fung, *What a terrible Comcast rep can teach regulators about the Time Warner Cable merger*, Wash. Post (July 16, 2014), http://www.washingtonpost.com/blogs/the-switch/wp/2014/07/16/what-a-terrible-comcast-rep-can-teach-regulators-about-the-time-warner-cable-merger/. While anecdotal, this account is not unique. *See* Jeffries, *The worst company in America*, The Verge ("Thousands of Comcast customers across the country have experienced similar customer service nightmares when dealing with the company. Usually these involve multiple rounds of phone calls, missed

Thus, the broadband services available to most residential customers consist of a cable offering and an inferior DSL option provided by the local telephone company with high switching costs that discourage customers from moving away from their cable service.[60]

Perhaps the best evidence of customers' inability to switch broadband providers is Comcast's success in negotiating paid peering arrangements. As discussed in greater detail below, Comcast has pursued a strategy of allowing its interconnections with Tier 1 providers to become congested as a bargaining strategy to obtain higher rates from Netflix. As Dr. Farrell notes, "Comcast was willing to sacrifice—not permanently but over a non-trivial period of time—its subscribers' user experience. I would encourage the FCC to ask whether, consistent with this, Comcast did not hemorrhage users when it failed to deliver consumers' requested content as speedily as other ISPs, as a firm facing fierce consumer-side competition would have done."[61] As one chief technology officer puts it:

> The true power of Comcast isn't in the size or scope of its network, it's in the captivity of its customer base.
>
> If Level 3 turned off Comcast for refusing to pay their contractually obligated transit bills, the traffic would be forced through massively congested Tata transit ports, and a huge number of Level 3's customers would take their business elsewhere as a result. If Comcast intentionally congests its transit providers and provides terrible service to its end users, which it has been doing for several months now, most of those users have no real alternatives to switch to.[62]

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technician appointments, and unexpected fees."). Relatedly, Dr. Farrell's analysis suggests that customer satisfaction is negatively correlated to the size of the company. *See* Farrell Decl. ¶¶ 103-118.

60 *See id*. ¶¶ 62-66.

61 *Id*. ¶ 131.

62 Rose, *The Economics of Internet Interconnection* at 5-6 (quoting Richard Steenbergen, who at the time was Chief Technology Officer at nLayer).

As discussed in greater detail below, this is exactly what happened when Comcast played hardball in negotiating paid peering arrangements, and it demonstrates both Comcast's market power and the extent to which broadband customers are locked in to being single-homed to Comcast.

B. Comcast Has Market Power Over Content Providers for Delivery of Content to ISP Subscribers

Over the last several years, Comcast has engaged in a protracted campaign to extract revenue from Netflix by (1) using a traffic ratio requirement to demand payment from Netflix or any entity that seeks to transmit traffic on behalf of Netflix and (2) either refusing to peer with such entities or, in the instances where the transmitting network is a Tier 1 provider, permitting the connections with the network to become congested which, in turn, yields degraded service. In doing so, Comcast ultimately was able to extract a paid peering arrangement from Netflix.

Comcast's actions demonstrate market power. Comcast's assertion that it should be able to require a balanced traffic ratio is not grounded in industry practice and is nothing more than a pretext to seek monopoly rents.[63] Its success in obtaining those rents is clear evidence that its market power is a function of the size of its subscriber base and its residential consumers being single-homed. Finally, the prices Comcast is charging appear to be higher than competitive transit rates available from Tier 1 providers.

1. Comcast's Balanced Traffic Argument is a Pretext for the Raw Exercise of Market Power

In the mid-2000s, without any justifiable basis, Comcast issued a peering policy that required a roughly balanced exchange of traffic.[64] Comcast's network, however, is explicitly

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63 Kilmer Decl. ¶¶ 55-60.

64 Norton, *Internet Peering Playbook*, at 137-38.

designed to be imbalanced, with modems and an infrastructure that only permits Comcast customers to upload data at a significantly slower rate than it can be downloaded.[65] Moreover, the inbound (to Comcast) traffic at issue is traffic requested by Comcast's broadband customers.[66] Comcast's argument is that it cannot afford to pay for the additional investment associated with providing high-speed Internet to its customers solely by charging its customers. This argument is belied by the experience of smaller cable companies that have not encountered this difficulty.[67]

Contrary to Comcast's claims, the need for balanced traffic ratios is not widely accepted. In fact, during a debate over traffic ratios at a meeting of the North America Network Operators Group ("NANOG"), the audience was polled and the "vote was about 100 to 3 that the metric

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[65] *See* Kilmer Decl. ¶ 57.

[66] *Id*. ¶ 58. In addition, "the path Internet traffic takes is routed according to that network's defined rules, but returning traffic will prefer the return path with the fewest autonomous systems. The network with the most connections will have the most traffic come back through it. Thus, a Tier 1 backbone provider will always deliver more traffic to a cable ISP than the cable ISP will transmit to a Tier 1 provider. This has been the default behavior of BGP routing since its inception in 1989." *Id*. ¶ 59.

[67] *See* Letter from Paul B. Elswick *et al.*, President & CEO, Sunset Digital Commc'ns, to Marlene Dortch, Secretary, FCC, GN Docket No. 14-28 (July 27, 2014), at 2 ("Sunset Digital Commc'ns Letter") ("As a network that is too small to make such demands, we have very little sympathy for a company that cannot afford to provide customers what was sold to them. Data has been increasing every year since the Internet began. That we are to believe that these experienced providers are suddenly surprised that customers keep pulling more data is far fetched."). In fact, evidence suggests that, as video streaming and VoIP have increased and Comcast has added additional broadband customers, Comcast's average operating expenses have actually decreased. *See* Hibah Hussain *et al.*, *Capping the Nation's Broadband Future?*, New America Foundation (Dec. 2012), at 5, *available at* http://newamerica.net/sites/newamerica.net/files/policydocs/CappingTheNationsBroadbandFuture.pdf (last visited Aug. 18, 2014) ("Until the end of 2010, Comcast publicly disclosed costs associated with its broadband service as a line item in their quarter financial reports. In 2007, the average quarterly operating expenses for its high-speed Internet service was $147 million to serve an average of just over 13 million customers. In 2010, average expenses had dropped to $122 million while the average number of customers grew to over 16.6 million. From 2007 to 2010 the trend was clear: it cost Comcast less to operate its broadband network even as it added more and more users.").

was not rational."[68] Cogent has always viewed traffic ratios as an inappropriate metric for evaluating peering.[69] But even if the metric were appropriate for peering between Tier 1 backbones, any even remotely colorable argument in favor of balanced traffic ratios would not be applicable to peering with residential broadband access networks.[70] In short, this requirement can only be viewed as a pretext for requiring networks to enter into paid peering arrangements to access the millions of residential broadband customers that can only be reached through Comcast. Should the transaction be completed, the number of customers, and the corresponding market power derived from control of such customers, will only increase.

2. Comcast has Exercised its Market Power against Networks that Have Delivered Netflix Traffic to Comcast

Comcast's tactic of using traffic ratios as a pretext to demand payment and congestion as the hammer to force payment is part of a strategy Comcast has been pursuing for at least the last three to four years. In 2011, paid peering arrangements were very rare; one survey found less than 0.27% of peering agreements were paid peering agreements.[71] Comcast's steady but sure

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[68] William Norton, *The Folly of Peering Ratios (as a Peering Candidate Discriminator)*, DrPeeringInternational, http://drpeering.net/white-papers/The-Folly-Of-Peering-Ratios.html; *see also* Robert Kenny, *The attack on settlement-free peering and the risk of 'access power' peering*, (June 21, 2013), at 9-18, *available at* http://ccianet.org/wp-content/uploads/2013/08/Access-Power-Peering.pdf (last visited Aug. 22, 2014). NANOG is an open Internet operations forum that arose from regional tech meetings created when the Internet was transitioned to the private sector. *See* Norton, *The Internet Peering Playbook*, at 103.

[69] Kilmer Decl. ¶¶ 17, 55-60.

[70] Letter from Bradley D. Bopp, Director of Eng'g, NationalNet, and fourteen other network engineers, to Chairman and Commissioners of the FCC, MB Docket No. 10-56, GN Docket No. 09-191 (Dec. 20, 2010) ("[T]raffic ratios are an outdated and misleading metric for determining equality and financial burden, and are not commonly considered in 'good faith' discussions between content and access providers seeking interconnection.").

[71] Bill Woodcock & Vijay Adhikari, *Survey Characteristics of Internet Carrier Interconnection Agreements*, Packet Clearing House (May 2, 2011), at 2, *available at* https://www.pch.net/resources/papers/peering-survey/PCH-Peering-Survey-2011.pdf (last visited Aug. 19, 2014).

success calls into question its claims that it cannot "degrade or otherwise be a 'bottleneck' for access to broadband customers."[72]

There are a variety of means by which an edge provider can deliver its content to a broadband access network: it can pay for transit, it can contract with a content delivery network ("CDN"),[73] or it can connect directly with the network itself. Comcast effectively blocked Netflix from using each avenue. As to the latter avenue, unlike a number of other residential broadband access networks, Comcast refused to connect directly with Netflix through Netflix's Open Connect platform.[74]

Netflix initially contracted with a CDN, Akamai, to deliver content. Akamai then agreed to a paid peering arrangement with Comcast. Interestingly, around this time, Comcast approached another CDN, Limelight, about paid peering. At first, Limelight did not agree.[75] Because Comcast refused to peer on a settlement-free basis with Limelight, Limelight had to connect with Comcast through Tata, a Tier 1 network that peered with Comcast. At that point, Limelight experienced congestion transmitting data through Tata.[76] Public reports at the time suggest that Comcast was deliberately operating Tata's ports at capacity.[77] As a result, Limelight

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72 Comcast/TWC Application at 156.

73 CDNs are networks of servers that facilitate the distribution of Internet content. Kilmer Decl. ¶ 27.

74 Netflix July 15, 2014 Comments, at 12 n.24 ("Open Connect is an open-source content delivery network ('CDN') that allows the most popular Netflix content to be stored within the ISP's network footprint."); *see also* Farrell Decl. ¶¶ 132-33.

75 Norton, *The Internet Peering Playbook*, at 139-41.

76 *Id.*; *see also* Letter from Adam Rothschild, Vice President, Voxel dot Net, Inc., to Marlene H. Dortch, Secretary, FCC, MB Docket No. 10-56 and GN Docket No. 09-191 (Jan. 11, 2011), at 2 ("By not upgrading key interconnects (e.g. Tata transit), Comcast is transitioning its service provisions from open Internet access to a walled garden in which only approved content and application providers are allowed to operate.").

77 *Id.* at 206-07; *see also* Rose, *The Economics of Internet Interconnection*, at 9.

was at a competitive disadvantage to Akamai, and ultimately agreed to a paid peering arrangement with Comcast.[78]

It appears that, given the higher cost of using Akamai after it entered into a paid peering arrangement with Comcast, Netflix began routing traffic through Level 3, a Tier 1 backbone that had a blended settlement-free peering and paid-transit arrangement with Comcast.[79] A reasonable inference from Netflix's choice is that Level 3's transit price was cheaper than the quality adjusted price of Akamai after accounting for the added cost of paid peering with Comcast.

Predictably, once Netflix started transmitting data through Level 3, Level 3 began to experience congestion.[80] Comcast was more pointed in dealing with Level 3. In responding to Level 3's requests to upgrade ports, Comcast demanded that the relationship between Comcast and Level 3 be converted from one in which Comcast paid for transit to one in which Level 3 paid Comcast for peering.[81] Level 3 has suggested that at least one broadband provider has subsequently demanded higher prices than Level 3 had been charging for transit.[82] Ultimately,

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78 Norton, *The Internet Peering Playbook*, at 139-41.

79 *Id.* at 142.

80 *Id*. at 143-44; *see also* Ken Florance, *The Case Against ISP Tolls*, Netflix (Apr. 24, 2014), http://blog.netflix.com/2014/04/the-case-against-isp-tolls.html (asserting that Comcast has congested its interconnections with Tata and Level 3).

81 Letter from John M. Ryan, Chief Legal Officer, Level 3 Commc'ns, LLC, to Marlene Dortch, Secretary, FCC, GN Docket No. 09-191 (Jan. 14, 2011), at 3.

82 Comments of Level 3 Commc'ns, LLC, GN Docket Nos. 14-28 and 09-191 (filed Mar. 21, 2014), at 8 ("While the precise size of the tolls demanded vary from ISP to ISP, in Level 3's experience they frequently equal or even exceed the price that Level 3 charges its customers for transit to those ISPs' networks (and the rest of the Internet as a whole.)").

Level 3 appeared to reach an agreement with Comcast, though the exact terms thereof are not public.[83]

Regardless of the precise contours of Comcast's arrangement with Level 3, Netflix next turned to Cogent for access to Comcast subscribers.[84] Although Comcast is not a Tier 1 network, it has obtained settlement-free peering with Cogent because of its size and locked-in customer base.[85] When Cogent began carrying Netflix traffic, Comcast began refusing to upgrade connections with Cogent.[86] Notably, smaller residential broadband networks continued to upgrade both peering and transit ports and Cogent has had no congestion problems with those networks.[87] Comcast argued that there was a traffic imbalance between it and Cogent and intimated that Cogent should enter into paid peering agreements with Comcast.[88] Interestingly, there had been significant traffic imbalances between Comcast and Cogent for years before, without those imbalances ever being a barrier to upgrading ports. Refusals to upgrade connections have led to significant amounts of congestion at Cogent's interconnection points with Comcast.[89]

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83 Norton asserts that Level 3 agreed to pay for peering, while Level 3 has stated that it has refused to so pay. *See* Norton, *The Internet Peering Playbook*, at 145; Level 3 July 15, 2014 Comments at 7.

84 Around this time, Netflix also began offering its own CDN, Open Connect, but, unlike smaller ISPs, Comcast refused to participate. *See* Farrell Decl. ¶¶ 132-33.

85 Kilmer Decl. ¶ 26.

86 *Id*. ¶¶ 61-65. It is important to note that the cost to upgrade connections is minor for companies like Cogent and Comcast. *Id*. ¶ 19, 68. In any event, Cogent offered to pay Comcast's costs. *Id*. ¶ 68.

87 Farrell Decl. ¶ 137, Figure 11.

88 Kilmer Decl. ¶ 65.

89 Farrell Decl. ¶¶ 133-37, Figures 11, 13; Kilmer Decl. ¶ 67. It is important to emphasize that such congestion is not attributable to capacity issues on Cogent's network. Cogent has continually "increase[d] the capacity of its network as necessary to avoid congestion and packet loss." *Id*. ¶ 7. "Any sustained packet loss experienced by Cogent's customers can be attributed to congested interconnection points with [Cogent's] peering partners, which is outside of Cogent's sole control." *Id*.

On February 23, 2014, Comcast announced that it signed a direct interconnection agreement with Netflix.[90] It is logical to assume that Netflix is paying Comcast more on a relative basis than it was paying for transit through Cogent. While Netflix was paying Cogent for access to essentially the entire Internet, whatever it is paying Comcast is only for access to Comcast's network.[91] Netflix subsequently also reached agreements with Verizon and AT&T, and, as reported just last week, TWC.[92] Based on its own experience, Cogent knows that ISPs' leverage and market power increase with size.[93] Cogent thus expects that TWC, Verizon, and AT&T have not been able to extract as much revenue from Netflix as Comcast. If this is the case—which the Commission can determine—it would be probative evidence that Comcast's market power and leverage will only increase with the acquisition of TWC.

3. A Competitive Transit Market Has Been an Important Catalyst to the Internet's Growth

The Internet is a catalyst for economic growth and innovation in large part because of the competitive market for Internet transit. When control of the Internet transitioned to the private

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[90] Press Release, Comcast, Comcast and Netflix Team Up to Provide Customers With Excellent User Experience (Feb. 23, 2014), *available at* http://corporate.comcast.com/news-information/news-feed/comcast-and-netflix (last visited Aug. 19, 2014).

[91] *See* Netflix July 15, 2014 Comments at 15-16 ("Transit networks like Level 3, XO, Cogent, and Tata perform two important services: (1) they carry traffic over long distances; and (2) they provide access to every network on the global Internet. Comcast does not connect Netflix to other networks. Nor does Comcast carry Netflix traffic over long distances. Netflix is itself bearing the costs and performing the transport function. It is Netflix that incurs the cost of moving Netflix content long distances, closer to the consumer, not Comcast."); Florance, *The Case Against ISP Tolls*, Netflix (explaining why Comcast is not charging Netflix for transit, but instead for access to Comcast's customers).

[92] Stephanie Mlot, *Netflix, AT&T Ink Peering Deal, Boost Streaming Speeds*, PC Magazine (July 30, 2014), http://www.pcmag.com/article2/0,2817,2461670,00.asp; Stephanie Mlot, *Verizon, Netflix Ink Deal for Improved Streaming Speeds*, PC Magazine (Apr. 29, 2014), http://www.pcmag.com/article2/0,2817,2457293,00.asp; Stacey Higginbotham, *Netflix is now paying Time Warner Cable for direct access and faster streams*, Gigaom (Aug. 19, 2014), http://gigaom.com/2014/08/19/netflix-is-now-paying-time-warner-cable-for-direct-access-and-faster-streams/.

[93] Kilmer Decl. ¶ 26; Farrell Decl. ¶¶ 173-75.

sector, Tier 1 backbones agreed to settlement-free peering with each other while charging all other networks for transit. Below the Tier 1 networks are Tier 2 networks that buy transit but also peer with other non-Tier 1 networks to reduce their cost of transit, thereby maintaining the ability to competitively price transit themselves. Edge providers can purchase transit or they can elect to peer directly with the smaller networks that receive the bulk of their traffic, thereby reducing the cost of transit. Finally, CDNs provide yet another route to end users. The market for transit services has been highly competitive and the price set by competition between Tier 1 providers has fallen significantly over time.[94]

Over the years, the Commission and DOJ have on numerous occasions taken steps to preserve competition in the market for Tier 1 backbone services. In 1998, DOJ required MCI to divest WorldCom's backbone network prior to approving the acquisition. If it had not done so, the result would have been that, "[b]y suddenly, and for reasons unrelated to any superiority of their networks, becoming much larger than the other backbone providers, the combined WorldCom/MCI network would need to interconnect with other networks less than those networks would need to interconnect with it."[95] In two other instances, the Commission concluded that, even though mergers of Internet backbone providers did not significantly

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[94] Kilmer Decl. ¶¶ 30-41. In particular, "[o]ver the past five years, Cogent has lowered its prices for data transit by approximately 22 percent per year, so that today [Cogent] sell[s] transit for an average price of $1.31 per megabit-per-second." Kilmer Decl. ¶ 33.

[95] A. Douglas Melamed, Principal Deputy Assistant Attorney Gen., Dep't of Justice, *Network Industries and Antitrust*, Address before the Federalist Society Eighteenth Annual Symposium (Apr. 10, 1999), at 9, *available at* http://www.justice.gov/atr/public/speeches/2428.pdf (last visited Aug. 19, 2014).

increase concentration, it was still appropriate to accept commitments from the merging parties that they would maintain settlement-free peering arrangements after the merger.[96]

The critical and pro-competitive role that a robust transit market has played in the rise of the Internet economy already has come under pressure from Comcast's pattern of behavior with Netflix and its ability to supplant transit pricing to Netflix with its own, apparently higher, pricing.[97] The transaction contemplated by the applicants, and its corresponding augmentation of Comcast's ability to exercise leverage over those who must deal with it, poses an even greater threat.

C. The Transaction Will Increase Comcast's Market Power

If the past is prologue, the combination of TWC's subscribers with Comcast's will increase Comcast's market power over the delivery of content to its customers.[98] Recent history suggests that the greater the number of broadband subscribers a firm controls, the greater its leverage becomes.

- Comcast's market power is evidenced by its ability to foreclose access to its network by enforcing extended periods of congestion with Tier 1 providers like Cogent, Level 3 and

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96 *SBC/AT&T Order* at 18351 ¶ 108; *In the Matter of Verizon Commc'ns Inc. & MCI, Inc. Applications for Approval of Transfer of Control*, WC Docket No. 05-75, Mem. Op. & Order, 20 FCC Rcd 18433, 18492 ¶ 109 (2005) ("*Verizon/MCI Order*").

97 As described in section IV.B.2, Netflix only agreed to Comcast's terms after trying and failing to find a transit provider that was not congested. *See* Netflix July 15, 2014 Comments at 14-15 ("[P]rior to its agreement to interconnect directly with Comcast, Netflix purchased all available transit capacity into Comcast's networks from multiple large transit providers. Every single one of those transit links to Comcast was congested (even though the transit providers requested extra capacity).").

98 The transaction will not only increase the number of Comcast's subscribers that content providers and networks will need to reach, it will also increase the significance of those customers. *See* Kimmelman Statement at 2 ("As a result of the merger . . . Comcast will also have a significant presence in 19 out 20 of the largest [Designated Market Areas] in the country.") (citing Comcast Corp., SEC Form 425 (Feb. 13, 2014), at 5, *available at* http://www.sec.gov/Archives/edgar/data/1166691/000095010314001082/dp44005_425-it.htm (last visited Aug. 20, 2014)).

Tata.[99] None of these Tier 1 networks could easily withstand a prolonged absence of interconnection with even just Comcast, a situation that will be more pronounced if Comcast and TWC broadband Internet access subscribers come to be under common control.

- Cogent's experience is that the larger cable companies can command settlement-free peering, despite lacking the attributes of a Tier 1 provider.[100] In addition, there is a correlation between size and the amount smaller cable companies pay for transit: the smaller the cable company, the less it is able to leverage its locked-in customer base to demand lower prices for transit.[101]

- Although Cogent does not have access to the details of Netflix's arrangements with Comcast, Cogent strongly suspects that such arrangements provide further evidence of Comcast's ability to act as a gatekeeper.[102]

While perhaps a company as established as Netflix can afford, albeit under protest,[103] to pay this toll, Comcast's ability to extract such tolls—which will increase after its subscriber base multiplies if the application is approved—would likely deter the innovation and investment required to create the next Netflix.[104] As the comments in the current *Open Internet* proceeding

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99 *See* section IV.B, *supra*.

100 Kilmer Decl. ¶¶ 26, 42-45. This dynamic appears to be equally applicable to bargaining between ISPs and edge providers. *See* Farrell Decl. ¶¶ 133, 177 (noting that larger ISPs were less willing to agree to Netflix's Open Connect offer).

101 Farrell Decl. ¶¶ 172-75. The correlative relationship between Comcast's size and market power is widely recognized by the media and the industry. *See, e.g.*, Jeffries, *The worst company in America*, The Verge ("Comcast's size enables it to extract fees that smaller cable providers can't"); Sunset Digital Commc'ns Letter at 2 (describing itself as "a network too small to make such demands").

102 As Dr. Farrell notes, the bargaining strategy Comcast employed—using congestion and degraded customer experience to force Netflix to pay for peering—indicates "that Comcast had more bargaining power than smaller ISPs." Farrell Decl. ¶ 131. "This pattern seems difficult to reconcile with a view that an ISP's size has no systematic relationship with its bargaining power." *Id*. ¶ 176; *see also id.* ¶ 177 ("[L]arger consumer ISPs declin[ed] Cogent's proposals to expand capacity on interconnection ports, while some smaller consumer ISPs agreed to do so.").

103 *See* Netflix July 15, 2014 Comments at 12-14.

104 *See, e.g.*, Letter from Brad Burnham, Union Square Ventures to Marlene H. Dortch, Secretary, FCC, GN Docket No. 14-28 (filed May 6, 2014), at 2 (venture capital firm managing partner stating, "So

indicate, such a result would negatively—and significantly so—impact bandwidth-heavy services such as video streaming[105] and latency-sensitive VoIP services.[106] However, this rent-seeking ability would also negatively affect a wider range of entities that depend on the Internet

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I can't imagine that we will risk our investors' capital in companies that will now be vulnerable to the whims of a gatekeeper that has the technology and incentive to discriminate against our [portfolio] companies' services"); Comments of Nat'l Venture Capital Ass'n, GN Docket No. 14-28 (filed July 15, 2014), at 1-2 (in 2013, the venture community invested $19 billion in Internet related companies and those investments depend on equitable access to the Internet; startup companies "can't afford to compete against those with deep pockets and established businesses" for priority access); *see also* Yancey Strickler, *FCC's 'fast lane' Internet plan threatens free exchange of ideas*, Wash. Post (July 4, 2014), http://www.washingtonpost.com/opinions/kickstarter-ceo-fccs-fast-lane-internet-plan-threatens-free-exchange-of-ideas/2014/07/04/a52ffd2a-fcbc-11e3-932c-0a55b81f48ce_story.html (CEO and co-founder of crowdfunding platform Kickstarter arguing that the Commission's proposed rules allowing paid prioritization would create a world of "enormous logistical and financial hurdles" where Internet start-ups will "succeed or fail not on the basis of their passion or service but on whether they have the resources and desire to pay the big Internet carriers").

[105] *See, e.g.*, Comments of Roku, Inc., GN Docket No. 14-28 (filed July 15, 2014), at iii (Roku's ability to offer competitive Internet streaming services is threatened by ISPs' discriminatory actions such as blocking or throttling); Comments of TouchCast, GN Docket Nos. 14-28 and 10-127 (filed July 17, 2014), at 3-5 (in the event ISPs charge for access, TouchCast's innovative video platform never would have been funded and could be shut out by exclusive agreements).

[106] *See, e.g.*, Comments of Vonage Holdings Corp., GN Docket Nos.14-28 and 10-127 (filed July 18, 2014), at 8 (Vonage's concern that ISPs would engage in discrimination is based on Vonage having encountered "an instance where its services were blocked by an ISP affiliated with a competing voice provider") (citing *In the Matter of Madison River Commc'ns, LLC and Affiliated Cos.*, File No. EB-05-IH-0110, Order and Consent Decree, 20 FCC Rcd 4295 (2005)); Comments of Microsoft Corp., GN Docket No. 14-28 (filed July 18, 2014), at 1-2, 24-25 ("Microsoft Corp. July 18, 2014 Comments") (Skype has been blocked or degraded by self-interested broadband providers in other countries and has concerns of the same practice in the U.S.).

including: educational software providers,[107] providers of cloud services,[108] virtual private networks,[109] home-security companies,[110] and media and content companies.[111]

In response, Comcast offers an ivory-tower inspired defense that, as a matter of theory, it should not have an incentive to charge higher prices for paid peering if it increases in size. As

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[107] *See, e.g.*, Comments of CodeCombat, GN Docket Nos. 14-28 and 10-127 (filed July 17, 2014), at 2 (congestion would "pose an existential threat to [CodeCombat's online educational coding] business by threatening the seamless and enjoyable experience that allows students to see the magic of programming"); Comments of Gen. Assembly, GN Docket Nos. 14-28 and 10-127 (filed July 17, 2014), at 5-7 (General Assembly's business—educating and preparing people for jobs through online learning—would be adversely affected by a two-tier system and never would have been funded initially if such a system existed).

[108] *See, e.g.*, Microsoft Corp. July 18, 2014 Comments at 2, 13 (cloud services like Bing, Office 365, Azure, OneDrive, and Xbox Live are all negatively impacted by delays in transmission of data).

[109] *See, e.g.*, Comments of Golden Frog, GN Docket Nos. 14-28, 10-127, 13-5, and 09-51, WT Docket No. 13-135, WC Docket No. 07-52 (filed July 18, 2014), at 6 ("[T]he very same Internet access providers who make [the claim that competitive responses from entities like VPNs prevent throttling] can throttle or block VPNs . . . . ").

[110] *See, e.g.*, Comments of ADT Corp., GN Docket No. 14-28 (filed July 16, 2014), at 5 ("ADT would be discouraged from investing in new technologies if access to broadband customers decreased or became unreliable due to paid prioritization, exclusive contracting, ISP blocking, throttling, or discrimination.").

[111] *See, e.g.*, Comments of the Indep. Film & Television Alliance, GN Docket No. 14-28 (filed July 15, 2014) at 5-8 (discriminatory practices by self-interested broadband providers would limit the variety and financial viability of independent film and television producers); Comments of AOL Inc., GN Docket No. 14-28 (filed July 15, 2014) at 6-7 ("Instead of a fast lane, edge providers will merely be purchasing a place in the queue. And an edge provider will enjoy uninterrupted (but probably not 'faster') service relative only to its ability to pay more than other edge providers for a place high up in the queue. The services of edge providers who are low in the queue, or who cannot afford to bid for a place at all, will be unusable by consumers – particularly at peak usage times. As a result, market cap will prevail over innovation every time, and the uniquely level playing field provided by the Internet will be at an end."); Comments of Floor64, Inc./Techdirt.com, GN Docket Nos. 14-28 and 10-127 (filed July 15, 2014), at 2 (online media company expressing concerns that paying for access would (1) significantly hinder innovative startups and (2) could lead to discrimination on the basis of media content). As Comcast's media and Internet empire expands, its reasons for engaging in measures, whether overt or subtle, to favor its own businesses likewise continue to expand. To take one recent example, just this month—perhaps capitalizing on Americans' intense interest in the World Cup—Comcast announced it had recruited two prominent soccer commentators to move their show from ESPN to NBC Sports. *See* Will Connors, *Men in Blazers Jump to NBC*, Wall Street J. (Aug. 10, 2014), http://online.wsj.com/articles/men-in-blazers-jump-to-nbc-1407714244?mod=WSJ_hps_MIDDLE_Video_second. One can imagine how this new acquisition could incentivize the combined Comcast/TWC's efforts to favor its soccer-oriented content to the detriment of smaller or new edge providers who, unlike ESPN, may lack the resources to effectively negotiate with the merged entity.

Dr. Farrell explains, the theoretical literature on which Comcast relies does not provide a prediction of the direction of merger effects,[112] while the empirical evidence is not as vague.[113] In fact, the empirical evidence matches the perception of Comcast's customers—a majority of polled customers believe the transaction would result in less competition and would be bad for consumers.[114] Perhaps most tellingly, even Comcast does not believe its creative fiction that size does not correlate to bargaining power. Indeed, its claims in this very proceeding with respect to Bright House losing its negotiating leverage if it can no longer negotiate jointly with TWC are diametrically opposed to this argument.[115] In fact, if its theory were correct, Comcast would actually benefit from acquiring an ownership interest in a Bright House severed from TWC—as the now smaller entity would presumably be able to negotiate better terms for Internet access.

Finally, Comcast argues that, even if it is gaining greater leverage as a result of the merger, that leverage is not anticompetitive as it would not reduce total welfare. As Dr. Farrell notes, there are at least three reasons to believe this is incorrect. First, it raises a traditional terminating access problem: "increases in access charges by one ISP may not result in higher prices for content for customers of only that ISP, but rather in higher prices paid by customers of

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112 *See* Farrell Dec. ¶¶ 148-53 (theoretical bargaining literature suggests that merger effects could go in either direction, though there is an alternate view that mergers will never lead to a decrease in bargaining leverage).

113 *See id*. ¶ 154 ("[A]vailable empirical evidence strongly suggests that a cable company's size increases its bargaining leverage"); *see also id*. ¶¶ 155-71. It also appears likely that, as Comcast gets bigger, other broadband networks will be more likely to follow Comcast's lead and demand higher prices for paid peering. The elimination of one of the few remaining significant broadband access providers would facilitate this kind of mimicry.

114 *Most Americans oppose Comcast merger with Time Warner Cable*, Consumer Reports (June 19, 2014), http://www.consumerreports.org/cro/news/2014/06/most-americans-oppose-comcast-merger-with-time-warner-cable/index.htm (consumers fear the merger would lead to price hikes, worse customer service, and threats to net neutrality); David Ingram, *Americans take dim view of Comcast, Time Warner Cable deal*, Reuters (Mar. 26, 2014), http://www.reuters.com/article/2014/03/26/us-usa-antitrust-idUSBREA2P0BD20140326.

115 *See supra* notes 46-47 and accompanying text.

all ISPs, including the rivals of the ISP initiating the price increase."[116] Second, where a merged entity like Comcast has incentives to harm innovative or disruptive competitors that threaten its vertically integrated content and MVPD services, "there is a price-discrimination incentive to artificially degrade the default or other alternatives."[117] Third, "there will be a tendency or temptation to price based on ex post willingness to pay, which risks confiscating quasi-rents for innovative and successful content."[118]

V. Comcast Fails to Offer any Convincing, Merger-specific Benefits that Outweigh the Potential Harms of the Transaction

Comcast and TWC argue that the transaction will benefit customers as a result of "(a) economies of scale, (b) expanded geographic reach, and (c) sharing of technologies and services."[119] For these claimed efficiencies to be given any weight, they would have to be cognizable (*i.e.*, verifiable and quantifiable) and merger-specific (*i.e.*, the parties would not be able to realize them through "practical alternatives that mitigate competitive concerns").[120] As an initial matter, if the parties' claimed efficiencies are merger-specific, that is strong evidence that Comcast and TWC do not face significant competition today.[121]

More importantly, the evidence does not support the claimed efficiencies as cognizable and, if anything, suggests the opposite—that increased scale leads to a less efficient result for cable customers. If increased scale were likely to improve cable service for customers, one would expect better service and greater customer satisfaction associated with larger cable

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116 Farrell Decl. ¶ 181.

117 *Id.* ¶ 182.

118 *Id.* ¶ 184.

119 Comcast/TWC Application at 23.

120 Horizontal Merger Guidelines at 30 n.13.

121 Farrell Decl. ¶ 102.

operators. Instead, Comcast, the largest cable company, and TWC, the second largest, are the first and second most hated companies in the U.S.[122] In fact, an analysis of four separate sets of consumer ratings data demonstrates that there is an inverse relationship between size and consumer satisfaction: the smaller the cable company, the greater the customer satisfaction.[123] In the face of this striking evidence of the *inefficiency* of past cable mergers—at least from the perspective of customers—the parties offer platitudes that *this* merger will be different.[124] However, as the Horizontal Merger Guidelines note, "the antitrust laws give competition, not internal operational efficiency, primacy in protecting customers."[125]

VI. If the Commission Approves the Application, it Must Impose Conditions that Ameliorate Internet-specific Public Interest Harms Attributable to the Transaction

As explained in the foregoing sections of this Petition, the proposed transaction raises serious public interest concerns that potentially cannot be remedied by any conceivable set of conditions. Nonetheless, to the extent the Commission believes that it is possible to craft conditions to ameliorate the harms to the transmission of data across the Internet that would arise

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122 Reed, *Massive Survey Finds Comcast And TWC Are The Two Most Hated Companies In America – Period*, BGR.

123 Farrell Decl. ¶¶ 103-18.

124 *See* Jeffries, *The worst company in America*, The Verge (citing one Comcast spokesperson as stating "[i]mproving customer service at Comcast is our number one priority," while simultaneously reporting, based on interviews with 150 current and former employees, that Comcast's customer service issues are "intractable"); *but see* Ryan Nakashima, *Comcast strikes deal to buy Time Warner Cable*, AP (Feb. 13, 2014) http://bigstory.ap.org/article/comcast-buy-time-warner-cable-45-billion (quoting Comcast Executive Vice President David Cohen as stating, "We're certainly not promising that customer bills are going to go down or that they'll increase less rapidly").

125 Horizontal Merger Guidelines at 31.

should the application be approved, Cogent submits that—at a minimum—the conditions described below must be among those included in the final order.[126]

The conditions proposed here are rooted in Cogent's experiences with, and observations of, Comcast's market behavior. Fundamentally, Comcast's strategy is to extract payments from everyone who wishes to reach its captive broadband Internet customers, either through more "Netflix-like" direct-connection deals or by extracting paid peering agreements from Tier 1 backbone providers. Comcast's ability to execute this strategy will only grow if it is given unfettered freedom to amass millions more broadband Internet access subscribers (and, in many cases, subscribers to bundled services). Moreover, a merged Comcast/TWC not governed by any conditions would be able to use its heightened leverage to insulate its own content from competition from rival content providers (*e.g.*, streaming video services). The combined Comcast/TWC could do so by maintaining congested interconnections with Tier 1 backbones or other transit providers that lead to the degradation of data carried by such networks.

Cogent and other transit providers stand to lose from this type of anticompetitive conduct which is, moreover, antithetical to the public interest. To the extent that the combined Comcast/TWC uses its bottleneck control to favor its proprietary content, its MVPD service and/or its Xfinity on-demand offerings, demand for transit from competing Internet content providers will diminish because edge providers that compete with such offerings will not be able to deliver their services with the same level of quality as the merged Comcast/TWC. While one cannot predict with certainty the extent to which these practices will materialize, it is certain that the applicants' offer to extend Comcast's commitment to abide by the now-vacated *Open*

[126] The conditions set forth herein relate only to the combined Comcast/TWC's operation of its broadband ISP business. It is likely that, should the application be approved, other conditions relating to matters such as the MVPD business would be necessary to ameliorate different public interest harms.

Internet Order to the merged entity[127] is not sufficient to discourage or prevent harmful practices that relate to interconnection with backbone networks.[128] Thus, in order for the Commission to find that the proposed transaction comports with the public interest, additional safeguards are necessary.

First, to the extent not, or not yet, adopted as a rule of general applicability (or if adopted and subsequently reversed by the D.C. Circuit), the merged Comcast/TWC should be subject to the enhanced transparency requirements set forth in Cogent's March 21, 2014 and July 15, 2014 comments in the Open Internet proceeding.[129] Doing so will ensure that the Commission, the public, and other firms in the Internet distribution chain have access to comprehensive and timely information that will permit the prompt detection of behavior that is discriminatory or otherwise inconsistent with the public interest. In addition, such a condition will have a deterrent effect, as the enhanced transparency requirements will provide a strong and self-executing incentive for a combined Comcast/TWC to refrain from such conduct in the first instance.[130]

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127 Comcast/TWC Application at 28.

128 As the Commission has made clear, the now-vacated *Open Internet Order* to which the applicants are willing to adhere does not cover interconnection arrangements. *See Open Internet Order* at 17944 ¶ 67 n.209 ("We do not intend our rules to affect existing arrangements for network interconnection, including existing paid peering arrangements."). Comcast's General Counsel has acknowledged as much. Block Letter (Ex. 2 to Kilmer Decl.); *see also* Ryan Letter at 2 (summarizing Chairman Genachowski's testimony before the House Communications and Internet Subcommittee in which he stated that the *Open Internet Order* "doesn't change anything with respect to existing peering arrangements").

129 Comments of Cogent Commc'ns Grp., GN Docket No. 14-28 (filed Mar. 21, 2014), at 10-17; Comments of Cogent Commc'ns Grp, GN Docket Nos. 14-28 and 10-127 (filed July 15, 2014), at 23-25.

130 In an effort to avoid committing to the enhanced transparency condition, the applicants may argue that, because Cogent first proposed this in the context of the Open Internet rulemaking it is, as a result, an issue of general industry applicability and, therefore, inherently not merger-specific. Such an argument has no merit. While the Internet community, along with the Commission and the public, would benefit from a more robust transparency regime across the board, the need for such transparency is particularly acute for a single firm that is seeking to control the access of tens of millions of Americans to the Internet. Put differently, public interest demands clear and contemporaneous visibility into various facets of how the merged firm would operate and manage its substantially enhanced Internet business.

Second, the Commission should require that, if any interconnection point between the combined Comcast/TWC and another network with whom it interconnects reaches 70% capacity, then Comcast/TWC must promptly undertake to upgrade the ports and cross-connects (on terms and conditions equivalent to then-existing agreements with such networks) to augment capacity and thereby avoid the congestion and resulting packet loss that will occur if the interconnection capacity extends much beyond that point.

This condition is particularly important to the extent the combined Comcast/TWC sells dedicated interconnections to particular edge providers. If the Commission permits the combined Comcast/TWC to enter into other Netflix-like deals, the merged entity will also have incentives to throttle or otherwise degrade its interconnections with backbone networks so as to create pressure on other, unaffiliated edge providers to enter into direct, paying interconnection arrangements with the merged entity.[131] This condition would not prevent Comcast/TWC from negotiating dedicated interconnection agreements with any edge provider or network. Nor would it prevent Comcast/TWC from refusing to negotiate a dedicated interconnection agreement.[132] Rather, this condition would prevent Comcast/TWC from slowly diminishing connectivity with another network, or otherwise impairing consumers' ability to access to content being delivered by a particular network, as a negotiating tactic or threat point with other networks or edge providers. It would also ensure a baseline level of service for the merged entity's broadband Internet access customers who wish to access content from an edge provider

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131 *See* Farrell Decl. ¶ 182.

132 Of course, it is possible that such refusal might violate other Commission conditions, rules, or other applicable laws.

that is unwilling or unable to pay Comcast/TWC for a dedicated interconnection.[133] Further, even if Comcast/TWC ultimately does not enter into dedicated access agreements with particular edge providers, this condition will prevent the nation's dominant broadband provider from adversely maintaining its interconnections with Tier 1 backbones and other transit providers in a manner that favors Comcast/TWC content that need not traverse other networks.

Third, the Commission should require the combined Comcast/TWC to, for a period of seven years following consummation of the merger, maintain settlement-free peering relationships with any network with whom either of the applicants had such a relationship as of February 13, 2014, the date Comcast and TWC announced the proposed transaction.[134]

As discussed in this Petition and the accompanying Kilmer Declaration, the market for Internet transit is robustly competitive.[135] That market has enabled the launch of many innovative applications, and will be an important input for new services on the horizon in areas

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[133] The performance of Netflix on the Comcast system subsequent to its February 23, 2014 interconnection agreement with Comcast confirms that congestion at peering points with backbone networks that carried Netflix traffic was the source of Comcast's customers' problems in accessing Netflix content. *See* Farrell Decl. ¶ 138, Figures 11, 13. Moreover, such rapid improvements in Netflix performance in the wake of its agreement with Comcast belie any argument that Comcast's network somehow cannot handle the increased traffic attributable to streaming video.

[134] Press Release, Comcast, Time Warner Cable to Merge with Comcast to Create a World-Class Technology and Media Company (Feb. 13, 2014), *available at* http://corporate.comcast.com/news-information/news-feed/time-warner-cable-to-merge-with-comcast-corporation (last visited Aug. 19, 2014). This condition, coupled with the condition addressing the augmentation of capacity at interconnection points, will ensure that affordable, high-quality transit alternatives remain for edge providers to reach Comcast/TWC customers who have already paid for access to all lawful Internet content. Of course, this condition would not limit the merged entity's ability to enter into additional settlement-free peering arrangements with other networks should it deem it in its interest to do so. The point here is to preserve the *status quo ante* for a defined period of time so that the combined Comcast/TWC cannot exercise its enhanced market power in ways that interfere with the competitive transit market that exists today.

[135] *See* Kilmer Decl. ¶¶ 30-41; *see also Global Crossing/Level 3 Order* at 14067-60 ¶¶ 26-29 (concluding that merger of Internet backbone providers did not raise concerns in an Internet transport market because of (1) the large number of Tier 1 providers, (2) the large number of customers that are multi-homed, (3) the existence of a wide network of settlement-free peers, (4) the growth in number of Tier 1 providers, and (5) competition from non-Tier 1 providers).

such as education, healthcare and entertainment. The success and impact of such services, though, will depend on the ability to reach, at sufficient speeds and quality levels, wired broadband customers—an enormous and unprecedented number of which would depend on the merged Comcast/TWC for their Internet access. That ability, in turn, will be at risk once the merged entity gains the increased incentives and abilities to discriminate against, and demand payment from, the Tier 1 backbones that provide a cost-efficient and reliable alternative to reach Comcast/TWC customers. If that occurs, at least two adverse effects may be expected: (a) increased costs for Tier 1 backbones, which will not be able to operate without interconnecting with the combined Comcast/TWC and which will have to raise prices for transit, thus leading to increased costs for smaller content providers that need transit to reach consumers, and (b) a decrease in the number of Tier 1 backbones, which could result in higher prices and a less efficient web of interconnected networks. These adverse consequences can be mitigated by a condition that would preserve the *status quo ante* with respect to transit as of the date the proposed transaction was announced. Thus, this proposed condition would ameliorate these merger-specific public interest harms.

Fourth, the Commission should prohibit the combined Comcast/TWC from engaging in unreasonable network management practices with respect to interconnection. One way to craft this condition is to make explicit that the "reasonable network management" carve-out in the *Open Internet Order*[136]—as applied to the merged entity through the applicants' voluntary commitment—is not limited to management only within Comcast/TWC's own network, but that the merged entity's practices with respect to other networks or edge providers with whom it interconnects are also subject to this reasonableness standard. The purpose of this condition is to

[136] *See Open Internet Order* at 17951-56 ¶¶ 82-92.

ensure that the merged Comcast/TWC cannot do indirectly what it already is prohibited from doing directly: discriminate against particular Internet content. While it may be difficult to prospectively identify all forms of conduct that might run afoul of this condition, at a minimum the condition should mandate that the combined Comcast/TWC cannot throttle, allow to congest, or otherwise degrade the traffic routed from one or more backbone providers while, at the same time, expanding capacity for other backbones or directly connected edge providers.

VII. Conclusion

The transaction proposed by Comcast and TWC presents serious, and perhaps irreparable, threats to the public interest that the Commission is charged with protecting. The applicants seek to amalgamate an enormous amount of control over the means by which tens of millions of Americans access the vast and growing array of Internet content. At the same time, and as a result of their massively increased broadband access footprint and their vertically integrated content interests, the applicants would have the ability and incentives to stifle edge providers' efforts to reach the merged entity's customers. Therefore, absent the types of conditions described above—each of which is directed at specific public interest harms attributable to the proposed merger—Cogent respectfully submits that the Commission should deny the application.

Dated: August 25, 2014 Respectfully submitted,

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